the Midland Great Western Railway between Galway and Athlone. We understand that the company intend establishing offices for telegraphic purposes at Galway, Athenry, Woodlawn, Ballinasloe, Athlone, Mullingar, Enfield, and Moate.

A new Roman Catholic church is to be erected in the parish of St. John, Limerick.

A committee of the Corporation of Dublin have waited on his Excellency the Earl of Eglinton respecting the erection of a new bridge near the Custom-houses. The deputation was graciously received, and a favourable reply given. Alterations to the exterior of the Royal Exchange, which is now being converted into a town-hall, are in contemplation.

THE LIGHTING OF ROME.

EVERYTHING is now settled preparatory to commencing the works: the Pope and authorities have expressed themselves as much interested in the undertaking, and the ground is purchased for the works. It was with some difficulty that the sanitary committee could be brought to approve of a site, and where do our readers think the deed of enlightenment is to be begun? On the site of the *Circus Maximus*, in the valley between the Palatine and Aventine hills. Opposite what will be the entrance-gate, is the house of Cicero, and right above are the ruins of the palace of the Cæsars! Permission for the use of the ground is granted on condition that Mr. Shepherd build his works only in the arena of the circus: he is forbidden to touch the *gradines* or seats, which preserve perfectly the form of the whole, and convey a fine idea of the magnificence of the circus. If we may judge from some old engravings, the chimney will be erected on the spot where formerly stood the fine obelisk which now adorns the Place St. John de Lateran, and close to where, if tradition reports truly, Androcles extracted the thorn from the lion's paw! *Tempora mutantur.*

The inhabitants are all agog, also, about the railway from Rome to Ancona and Bologna. It is feared there will be some delay, but there seems every probability a road from Rome to the frontier of Naples will be soon commenced by a Belgian engineer, Courtine: the deposit is paid, and he daily expects the concession.

Notices of Books.

Great Artists and Great Anatomists. By R. KNOX, M.D. &c. London, John Van Voorst. 1852.

WE have here "two parallel biographies," or rather disquisitions on the lives of, first, Cuvier and Geoffroy, and secondly, of Leonardo da Vinci, Michelangelo, and Raphael. It contains much acute and interesting writing, but is, nevertheless, a disappointing book. The author says his object is threefold—

"1st. To establish the exact relation of descriptive anatomy to the science of the animal organic world, as it now is and as it once existed. In the life and labours of George Cuvier, as he views them, the author finds this relation fully made out. Before Cuvier appeared, geology was a farce, a subject of ridicule; cosmogony a myth; the history of creation a tissue of error and absurdities. 2nd. To trace transcendental anatomy to its essence, and to show, in the life and labours of Geoffrey (St. Hilaire), that the philosophy of the creation of animals is explicable only by descriptive anatomy. 3rd. To discover, if possible, in the life and labours of the immortal artist who painted the 'Cena,' and of his great rivals, Angelo and Raphael, the true relation of descriptive anatomy to art."

It is something even to attempt such a task: The main point insisted on in the inquiry, so far as it concerns art is, that anatomy has been wrongly studied by artists; that it

"Has unhappily induced the artist to display what he knows, instead of enabling him cunningly to conceal that knowledge, as Nature has done, from the gaze of the world. He begins where he should end, and by drawing anatomically he displays that knowledge which he should keep in reserve merely to prove the correctness of his power of observing living forms."

Our artists have mistaken the dead for the living.

"On canvas we have death-like dissected figures; in marble, cold, frigid, lifeless *statues*. Look at the sculptures in the Great Exhibition, and ask yourself how it is that so few of those marbles, single or in groups, rouse your sympathies and receive your admiration. I shall tell you. It is the almost total absence of that *life-like surface* which alone distinguishes the living from the dead; the Venus de Medici from ——. Art then at its origin, at its commencement, owed nothing to anatomy. Art, as it arose in Italy, and as it has existed since, endeavoured to assume a new position, to adopt another ally—science. One thing at least is certain, the canon of the Beautiful and the Perfect was already displayed to the Italian masters, in the remains of Antique Art; Niobe and her daughters; the Venus de Medici and of Melos; the Mars and the Apollo were not to be surpassed. They were disinterred at or about the time of Da Vinci. The question which it was for them first to solve was, how were these matchless remains to be read or understood. The grosser minds of modern men, at least of the European mind of that period, a compost of the barbaric races of the eastern and western worlds, minds sunk into conventionalism, brutality, and the most deplorable superstition, could not at first discover 'Nature in Antique Art.' This was natural enough. But the great Italian masters made the discovery at once. They did not exactly copy or imitate the ancient masters; they studied their remains, and tried to understand them."

Leonardo's Sketch-Book, now in the Queen's private library at Windsor, proves, the author says, that Leonardo never suffered his anatomical studies to mislead him for a moment as an artist.

"There is but one school of art—Nature. But to read her volume profitably, artists must study profoundly the antique Greek, and ancient Italian school, formed by the era of Leonardo, Angelo, and Raphael.

It may precede, or follow, or coincide with the study of the living figure; still these immortal works must be your guide; for, whether it be composition, or colouring, or design, you are likely to find that these masters read Nature more clearly than you ever can. But do not copy nor imitate them farther than as objects of study.

Learn anatomy by all means: but do not forget its object. When you draw a dissected limb, be sure to sketch the living one beside it, that you may at once contrast them and note the differences. In drawing from the nude figure, contrast your sketch with the antique; you will find in it many defects. Never forget that perfection, the result of a high specialisation of Nature's law of individuality, is rare; the opposite, that is, imperfection, the result of a tendency to unity of organisation, is by far the more common."

Miscellanea.

ARTIFICIAL PRODUCTION OF FISH.—A new and rather an extraordinary branch of manufacture has arisen suddenly in France, where a couple of poor fishermen of the Vosges, despondent on account of the decline of their staple article, the trout, set to work with a series of experiments devoted to the revival of their trade. The artificial production of fish (as well as of small reptiles, such as frogs or toads), has been long known as a scientific fact, and was at one time carried out to some extent in Scotland; but it is only now that the fact has been fairly and fully combined with practice. It is even said that the two fishermen alluded to have not only made practical use of the fact, but that they rediscovered it for themselves. However this may be, they appear to be fully entitled to be regarded as originators of the practical and successful manufacture of fish, which are now produced by millions — we had almost said by billions—every season. Of course, it is only by making use of the milt and the roe of the fish at the proper season, and disposing of these to the best advantage by artificial arrangements, that the young stock is collected. We cannot enter into the details of the manufacture here, however, but must refer to a recent little shilling pamphlet on "The Artificial Production of Fish," by Piscarius, published by Messrs. Reeve and Co. of Covent Garden. The poor men to whom France is indebted for this new and most important manufacture have been patronised by Louis Napoleon, and appointed by his Government to superintend the introduction of this new branch of industry into various parts of France; and we earnestly hope that our own Government will act in a similar spirit, so as to establish the fish manufacture, or pisciculture, amongst the lakes, ponds, rivers, and streams of Great Britain and Ireland. Paddy might thus have something else than "point" to his potatoes; and as his conscience revolted against the idea of "taking all the fish out of the sea," as a coasting fisherman, he may find it more easy to reconcile his Brahminical scruples by an artificial increase of the article which it would do him so much good to diminish by aid of his maxillary apparatus.

INSTITUTION OF MECHANICAL ENGINEERS.—On Wednesday week a special general meeting of this Institution was held at the rooms of the Society of Arts. Mr. M'Connell, engineer of the North-Western Railway, presided. A paper was read on the Principles of the Centrifugal Pump, by Mr. Scott, of London. The opinion of the writer of the paper, that practically considerably less than fifty per cent. could be obtained by centrifugal power, was combatted by the friends of Messrs. Appold, Bessimer, and Gwynne on the one hand, and by the advocates of the old system on the other. On the part of the former it was contended by Mr. Crampton and others that the result of the trials made at the Great Exhibition by Mr. Hensman showed a clear result of seventy-five per cent. and that pumps since constructed by Mr. Appold, had given from sixty-nine to seventy per cent. Mr. Vignolles stated that the whole question of the value of this class of pumps resolved itself into the profitable conversion of speed into power, and as no evidence had been given on the point they were unable to come to any conclusion on the subject. Further discussion of the paper was adjourned to next meeting. The remaining papers read were:—On the "Expansive Action of Steam in Locomotive Engines," by Mr. Daniel K. Clark, of Edinburgh; on the "Expansion of isolated Steam and the total Heat of Steam," by Mr. Charles W. Siemens, of London; on "Bourdon's Metallic Barometer, Indicator, and other Applications of the same Principle," by Mr. Charles Cowper, of London; on an "Improved Screw Propeller," by Mr. George Bovill, of London; and on a "New Direct-acting Steam-pump," by Mr. Wm. K. Whytehead, of London.

VISIT OF LIVERPOOL ARCHITECTS TO MANCHESTER.—The members of the Liverpool Architectural Society paid a visit to Manchester on Monday, the 5th inst. The excursionists proceeded along Strangeways, and spent some time in examining the wrought-iron gate and its piers of the Old Hall. Returning towards the centre of the town, they examined the exterior of the cathedral. The principal attraction in Salford was the Roman Catholic Cathedral, and the Presbyterian Chapel, as an adaptation of "cheap architecture." The old timber house, Smithy Door, received a passing notice; and the Exchange, Cheetham College, and Sir Benjamin Heywood's Bank, were visited. It is a subject of remark, that the architects of Manchester did not exhibit any desire to welcome their brethren from Liverpool. This surprises us the less, because we remember that when the British Archæological Association visited Manchester, the architects of that town, with one or two excellent exceptions, neither shewed the slightest interest in the objects of the meeting, nor the smallest amount of good feeling towards the visitors.

IMPROVEMENT IN GAS AND COKE MANUFACTURE.—A patent has been taken out by Messrs. Newton, of Chancery-lane, for a method of producing a coal gas, free to a certain extent of bituminous oils, and a coke suitable for smelting, locomotive, and other furnaces. The apparatus is a modification of a patent secured by Messrs. Pauwels and Dubochet in April 1850.

A TUBULAR IRON BRIDGE, in the style of those in England, is to be constructed over the Ourthe, at Tilff, in Belgium.

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